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S. Dershem and F. Mizori
Application No. 10/023,520
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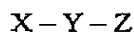
Atty. Dkt. No. QUANT1290-1
(028248-1803)

In the Claims:

Please cancel Claims 4, 8-13, and 28-34. By the present communication, Claim 23 is amended. Claims 35-39 were not entered in the Advisory Action. Claims 40-44 are added by the present amendment. This listing of claims will replace all prior versions and listings of claims in the application:

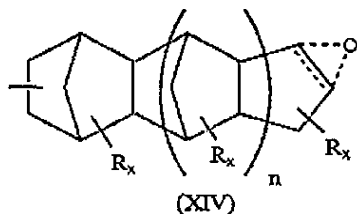
Claims 1-22. (Canceled)

Claim 23. (Currently Amended) A bifunctional monomer according to the following structure:



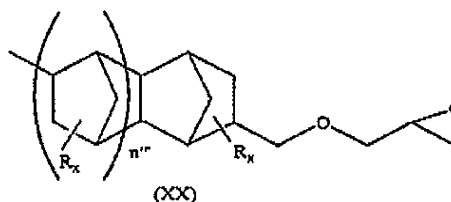
wherein:

X is a trimer or tetramer of optionally substituted cyclopentadiene bearing at least one functional group, or a radical having one of the following structures:



wherein:

each R is independently lower alkyl or halogen,
n is 1 or 2,



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n''' is 0 up to about 8, and

each x is independently 0, 1, or 2;

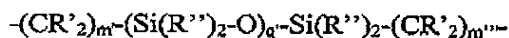
Y is an ~~optional~~ bridging group selected from a siloxane or aromatic groups; and

Z is a trimer or tetramer of an optionally substituted cyclopentadiene moiety bearing at least one functional group, a radical having structure (XIV), (XX), an epoxy, or a cycloaliphatic moiety bearing at least one functional group; and

wherein at least one of the functional groups on the bifunctional monomer is epoxy.

Claim 24. (Previously Presented) A bifunctional monomer according to claim 23, wherein Y is siloxane.

Claim 25. (Previously Presented) A bifunctional monomer according to claim 24, the siloxane having the structure:



wherein:

each R' is independently a lower alkyl or halogen,

each R'' is independently selected from hydrogen, lower alkyl or aryl,

m' falls in the range of 0 up to about 10,

m'' falls in the range of 0 up to about 10, and

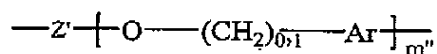
q' falls in the range of 1 up to 50.

Claim 26. (Previously Presented) A bifunctional monomer according to claim 23, wherein Y is aromatic groups having the structure:

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wherein:

$m'' = 1, 2 \text{ or } 3,$

each Ar is a monosubstituted, disubstituted or trisubstituted aromatic or heteroaromatic ring having in the range of 3 up to 10 carbon atoms, and

Z' is a high molecular weight branched chain alkylene or alkylene oxide species having from about 12 to about 500 atoms in the backbone thereof,

as well as mixtures thereof.

Claim 27. (Previously Presented) A bifunctional monomer according to claim 23, wherein the substituents are independently lower alkyl or halogen.

Claim 28-34. (Canceled)

Claim 35-39. (Not Entered)

Claim 40. (New) A bifunctional monomer according to the following structure:



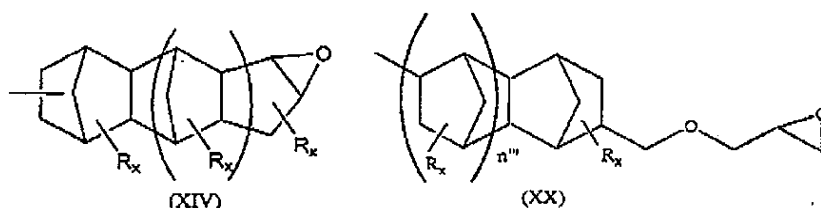
wherein:

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X is a trimer or tetramer of optionally substituted cyclopentadiene bearing at least one functional group, or a radical having one of the following structures:



wherein:

each R is independently lower alkyl or halogen,

n is 1 or 2,

n''' is 0 up to about 8, and

each x is independently 0, 1, or 2;

Y is an optional bridging group selected from a siloxane or aromatic groups; and

Z is a trimer or tetramer of an optionally substituted cyclopentadiene moiety bearing at least one functional group, a radical having structure (XIV) or (XX), an epoxy, or a cycloaliphatic moiety bearing at least one functional group;

and wherein at least one of the functional groups on the bifunctional monomer is epoxy and the other functional groups are independently maleimido, norbornyl, cyanate ester, (meth)acrylates,

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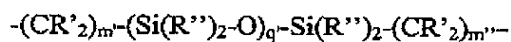
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anhydrides, carboxylic acids, amines, amides, sulfides, or polyhydroxy hydrocarbyls.

Claim 41. (New) A bifunctional monomer according to claim 40, wherein Y is siloxane.

Claim 42. (New) A bifunctional monomer according to claim 41, the siloxane having the structure:



wherein:

each R' is independently a lower alkyl or halogen,

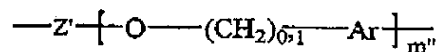
each R'' is independently selected from hydrogen, lower alkyl or aryl,

m' falls in the range of 0 up to about 10,

m'' falls in the range of 0 up to about 10, and

q falls in the range of 1 up to 50.

Claim 43. (New) A bifunctional monomer according to claim 40, wherein Y is aromatic groups having the structure:



wherein:

m'' = 1, 2 or 3,

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each Ar is a monosubstituted, disubstituted or trisubstituted aromatic or heteroaromatic ring having in the range of 3 up to 10 carbon atoms, and

Z' is a high molecular weight branched chain alkylene or alkylene oxide species having from about 12 to about 500 atoms in the backbone thereof,

as well as mixtures thereof.

Claim 44. (New) A bifunctional monomer according to claim 40, wherein the substituents are independently lower alkyl or halogen.

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